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Behavioral Change in Children Seen at the Fort Hays Kansas State College Psychological Service Center

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BEHAVIORAL CHANGE IN CHILDREN SEEN AT THE FORT HAYS KANSAS STATE COLLEGE PSYCHOLOGICAL SERVICE CENTER

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by

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(An Abstract)

This thesis reports research concerning the services rendered by the Fort Hays Kansas State College Psychological Service Center. Its main purpose was to collect information to determine the effectiveness of these services. It attempted (1) to discover the behavioral changes that had taken place in children who were seen at the Fort Hays Clinic during the fiscal year 1961-62, two years prior to this study, (2) to determine if these behavioral changes were more or less adaptive than those displayed in 1961 and 1962, and (3) to draw some general conclusions about the nature of these changes and the part the Fort Hays Clinic played in bringing them about.

Information about each child's condition at the time of the study was obtained by means of questionnaires sent to parents and other parties. Twenty-eight (28) children met the survey method's requirements and became the N. Parents, various second parties, and judges all took part in the process of determining if improvement had taken place; if the clinic's services played a role in the final outcome; and if the parents and second parties considered the trip they had made to the clinic as worthwhile.

The general conclusions reached were these: (1) a high percentage of the children showed improvement, (2) the clinic's services most likely played a role in the outcome, and (3) these services are considered worthwhile by the parents and other parties. Other questions of experimental interest were discussed and ways to improve the survey method were suggested.

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CHAPTER I

THE CLINIC

The Fort Hays Psychological Service Center is located on the campus of Fort Hays Kansas State College, Hays, Kansas. It was established in 1932 to provide psychological services to the children and youth of Western Kansas. The funds required to run the clinic are provided by the State of Kansas.

The majority of children seen at the clinic are of elementary school age. Referrals are made by school personnel, social welfare agencies, private physicians, ministers and by parents themselves. Many of the cases are routine in that they deal with children of very low intellectual ability with no other presenting problems. These are given intellectual evaluations to determine their elegibility to enter special education classes. These cases are not included in the study. Other presenting symptoms include the entire array of mental and emotional and psychological problems of children. Approximately two hundred (200) children are seen each year with this number growing rapidly.

Nearly all of the children are seen at the center only once for a total of about three hours. This three-hour period involves up to nine man-hours since as many

as three persons (the clinic staff member and two graduate student assistants) collaborate in the psychological survey. In this three-hour period an assessment of intellectual and emotional functioning of the child is made. Interviews with the parents or guardians, and sometimes the teachers, are included in this process. Findings are then discussed with the parents and teachers (and, at times, the child), and recommendations are made. Reports of the findings and recommendations are usually sent to the agency initiating the referral, or to the person most involved in carrying out the recommendations (other than the parents).

At times, children are seen on a continued treatment basis when it is felt that this further relationship (counseling, play therapy, etc.) will be beneficial. Parents are usually seen at this time to help them understand and learn more about their child and his problems. The small staff places limits on the number of children who can be seen on a continued basis.

The staff is made up of three clinical psychologists who are half time in the center and half time in teaching at Fort Hays Kansas State College. They do the bulk of the interviewing and test interpretation and make most of the recommendations. Psychology graduate students, under the supervision of the psychologists, assist in the clinic's

activities as part of their training in clinical psychology. In this way, the center serves an important teaching function.

As can be seen from the above description, many of the children are never heard of or seen by the staff members again. The effect of the clinic's recommendations was not known. This survey was intended to supply information as to the effects of the clinic's efforts.

CHAPTER II

PROCEDURAL CONSIDERATIONS

Criteria of Improvement

In attempting to evaluate the Fort Hays Clinic, the determination of what constitutes psychological improvement was seen as the most difficult problem. A purely objective method of measuring "improvement" due to treatment (whatever it may be) does not now exist, and it is doubtful that one ever will. Many studies have attempted to solve this problem by employing tests (e.g., M M P I, Wechsler, Rorschach, etc.), or such criteria as length of stay in a mental institution and number of discharges, or a complete diagnosis of the patient. These measures are applied before and after (and sometimes during) treatment and then the credit for any changes which occur is attributed to the treatment procedure (e.g., Cadman, 1954; Barrow, 1955; Peters, 1951; Berg, 1952).

Most studies dealing with the outcome of treatment are concerned with changes in personality, I.Q., interests, attitude, ego-structure, etc. While speculation about changes in these areas is interesting, the primary concern for the parents and teachers is in the adaptiveness or normality of the client's behavior. Changes in personality, attitude, ego-structure, etc., if not accompanied by changes in the maladaptive behavioral pattern

(if this is indeed possible), are useless and contrary to the practical goals of psychological treatment.

Pascal and Zax (1956) state this about the goals of psychotherapy:

> By all means let us make the patient's ego-defenses more suitable. Let us change his attitudes about himself and others. But these have no significance if they are not reflected in the behavior of the patient as it is displayed in the environment in which he has to live. Making ego-defenses more suitable (or what have you) may be an hypothesis concerning a <u>way</u> to effect behavioral change but it cannot be used as a criterion. Neither can unvalidated tests and questionnaires (no matter how much they are Q-sorted) be used as criteria. If the ultimate purpose of psychotherapy is to effect behavioral change (and it has to be) then <u>behavior</u> must be the criterion. This proposition not only makes sense but it gets us closer to the science of psychology (Pascal and Zax, 1956).

The main task of this project was to compare the on going behavior of the children who were seen at the Fort Hays Psychological Service Center about two years prior to this study with the behavior they displayed at the time of their evaluation. The adaptiveness of the behavior at the time of this survey as compared to that of the previous behavioral pattern was the criterion of improvement. Adaptiveness here refers to the degree in which the client's behaviors conform to the population norms. Adaptive behavior is behavior which falls within the normal, expected, acceptable range of behaviors, and unadaptive behavior is behavior which does not fall within this range. It must be kept in mind that adaptiveness is

not black or white. Some behaviors can be considered more or less adaptive than others just as they can be considered as more or less normal than others. Therefore when speaking of the adaptiveness of behavior, a place on the continuum from very abnormal to very normal is being designated with the normal being the most adaptable and desirable.

Control

By employing the procedure outlined above, a control factor is included. In this survey, an "after treatment" measure was taken and compared with a "before treatment" measure obtained approximately two years ago from the same subjects. This method of "self-control," using the same group for both the control and experimental phases, while not perfect, is probably the best that can be done in this particular situation. It was suggested that "drop-outs," children who did not keep their appointments, could be used as a separate control group. However, several factors ruled out this idea. By using only "drop-outs" and comparing them with children who did not "drop-out," an uncontrolled variable could possibly have been introduced; that is, there may be some factor which is present in those who do not keep appointments (parents or others) which make them unlike the clients that do keep their appointments.

Two other reasons made this procedure unfeasible. (1) There are few "drop-outs," and (2) the clinic has no records on these "drop-out" children from which a "before treatment" measure could be made. Any attempt to obtain these measures from parents, teachers, etc. would have been untrustworthy due to the unreliability of human memory. This same reasoning was used to rule out the suggestion that a control group be made up of children who needed help two years prior to this study but were not referred or treated for various reasons.

The biggest question in regard to using the self-control method is this: How can one definitely say that the changes are due to the treatment? This can be asked even of those studies with control groups. This question had to be kept in mind when the results were interpreted and the conclusions drawn.

Other considerations

Regardless of the results obtained, it would be difficult to state what part the clinical experience had on the outcome. For instance, if the later behavioral pattern of the client is more adaptive, the causes can be, and probably would be, due to more than this one experience. If the behaviors were the same at the time of this study as they were before, it might be postulated

that the clinical session had no effect. However, the session may have been the cause that the behaviors became no worse; or, perhaps it had harmful effects and kept the more adaptive behavior from developing. Speculations along these lines, whatever the differences in behaviors, are numberless. With the results in hand, however, one's speculations hopefully have more merit.

One of the biggest reasons that it is difficult to assess the degree that the clinical visit played in the behavioral changes is that the Fort Hays Clinic sees the client for a total of only three hours. Since this is the only contact, it can easily be realized that many factors beside the clinical session can enter in to alter behavior.

Many of the recommendations made by the clinic include referrals to other clinics, hospitals, out-patient centers, special school courses and programs, and the like. At other times, instructions are given to the parents, teachers, friends, or to the clients themselves. And, as mentioned earlier, some clients are seen at the clinic for individual therapy. Thus, it can be seen that the Fort Hays Clinic's effectiveness depends upon the correctness of its referrals; the advice it gives and the degree to which it is followed; and the results of its own therapy program.

It can now be seen that the part the clinic plays in treatment is usually indirect. Mental hospitals, counselors, school programs (etc.) to which some clients are referred may have to take much of the credit or blame for the outcome. In the cases of "therapy" by the parents, teachers (etc.), the results of treatment depend upon the skills of the advised. However, in these cases the clinic has more direct bearing for it determines what advice is given to these "laymen" who can only trust and follow blindly. In those instances where the advice is not followed, the credit for success, or blame for failure, can't all be given to the clinic.

One must be careful, however, to avoid overlooking the importance of the clinic in all of these circumstances. Good evaluations, recommendations, and referrals are very important factors in any psychological treatment procedure.

CHAPTER III

THE SURVEY METHOD

Statement of Purpose

The purpose of this study was to determine the effectiveness of the services rendered by the Fort Hays Kansas State College Psychological Service Center. To accomplish this, three main steps, purposes in themselves, were necessary. They were: (1) to discover the behavioral changes that had taken place in children who were seen at the Fort Hays Clinic in 1961 and 1962, two years before this study; (2) to determine if these behavioral changes were more or less adaptive than those displayed in 1961 and 1962; (3) to draw some general conclusions about the nature of these changes and the part the Fort Hays Clinic played in bringing them about.

Subjects

The children who were studied were seen at the Fort Hays Kansas State Psychological Service Center during 1961 and 1962. Each S also met each of these criteria.

1. Demonstration of an I.Q. of at least 80 at the time of the visit to the center.
2. Living at the time of the study.

3. Cooperation of his parents (guardians) and teachers or other party with the surveyor.
4. Records of his psychological evaluation were available to the surveyor.

It was decided that only children seen about two years prior to the study would be used since in a two year period some changes from nearly any type of effective treatment can be expected. Another reason that these children were chosen is that it seems that much more accurate and complete records were kept at that time than in the previous years.

An I.Q. of at least 80 was required to eliminate those cases in which improvement to a "normal" functioning level cannot be expected. Many of the children with very low intellectual ability were seen only for testing so they could obtain proper credentials to allow them to attend special classes for the mentally retarded. Thus mongoloids, the severely brain damaged, etc. were not included in this survey.

The second and third numbered items were required for obvious reasons. As for the fourth item, clinical records on each child were needed so that the maladaptive behavior or "before treatment" measures could be determined and supply this surveyor with such information as name, age, address, etc.

During the process of extracting information from the files several potential subjects were rejected for several reasons. These included children who were seen at the clinic for evaluation only. These were the cases in which the purpose in seeing the children was to determine intellectual level for adoption purposes, to supply information needed by the schools, or to fill requests by other agencies for simple evaluations. Reports in which no recommendations were made and cases in which the subjects were older than twenty were not included.

In all, sixty-nine (69) children fitted the general requirements. To their parents (guardians) and teachers or other parties were sent letters asking for information. Requirement number three was considered met when this information was supplied. Twenty-eight of the sixty-nine met all of these requirements and became the N.

Data Collection

Two sources of information concerning on going behavior were required. The parents or guardians were asked to supply one description, and the party to whom the clinical report was sent was requested to provide the second estimate of behavior. Usually this second party was a teacher, principal or counselor of the child. At times it was a doctor or friend.

The collection of the behavioral data was done entirely through correspondence. Each request for information contained (1) a form letter explaining the general nature of the survey, the purpose, and a request for cooperation; (2) a special questionnaire constructed individually for each client to be filled out by the addressee; and (3) a self-addressed, postage paid business reply envelope to be sent back to the clinic with the requested information.

In several cases (about two dozen), in order to increase the number of replies, a second request or reminder letter was sent when no response to the first was received. This was done only in cases where one of the two required letters had been received. It was felt that when neither party replied to the first letter the chances of obtaining cooperation from both by using a second request were low and was not worth the time and effort. Also, whenever the second requests were left unanswered, the case was discarded. This approach may be criticized because obvious variables may have been introduced into the survey. However, it was decided that these requests would not be pressed further because of the possible occurance of harmful effects which may be a result of reviving an already tender and precarious situation. Sargent (1960) reports that in general we do not know

what effects the follow-up communication may have, but she warns: "Caution, at least, is indicated. The surgeon does not reopen wounds to see how the healing process has come along."---(p. 497).

The Form Letter. The main purpose of the form letter was to explain the general nature of the survey and its purpose, to ask for cooperation, and to give overall instructions. It was stamped with the word "confidential" in red, and signed by the clinic director. The contents of this letter and the one used in the second requests are included in Appendix A.

The Questionnaire. Each questionnaire differed depending upon the devient behaviors attributed to each client at the time of the original interview. An attempt was made to design each inquiry so that it would take little effort on the part of the interviewee to give information. Usually a check mark or a one-word "fill-in" was all that was required. It was necessary, however, that the informer write some comments in essay form. This was the case where he had to make an estimate of S's behavior and list and explain any other noteworthy facts about the client. There were four requests that were present in every questionnaire. These were: (1) to list and describe any current problems or symptoms the subject had that he did

not seem to have two years previously; (2) to rate the child as improved or worse, with regard to certain indicated behaviors; (3) to indicate on an eight point scale how closely they believed the recommendations given to them at the clinic were followed; and (4) to indicate (if they could decide) whether or not the trip to the clinic was worthwhile. An example behavioral description is given in Appendix B, and a questionnaire is included in Appendix C.

There were usually some differences between the questionnaires sent to the parents and those sent to the party who received the original clinical report. These differences were generally slight and aimed at getting the best picture of the client's behavior at the time of this study.

Treatment of Data

When two questionnaires had been filled out and returned, the surveyor combined the replies into one estimate of the client's condition. At times the information given by one party differed from that supplied by the other concerning the behavior of the same child. Some *a priori* rules were followed in resolving these differences. For instance, when the behavior of the subject in school was in question (grade, playground activity, etc.) the judgment of a teacher was used rather than a parent's.

The opposite was the case in regard to home or private matters (bed-wetting, nightmares, etc.). At other times the behaviors described were considered situational. That is, a parent might state that the child fights often and his teacher might say that he has never seen him fight. The behavioral description here would be, "Fights at home." Also, several times the data supplied by the two respondents were combined into something of an average.

In cases where the differences were not so easily solvable, this surveyor asked collegues to determine what the descriptions should be. For the entire project this had to be done approximately a half-dozen times.

When this information has been compiled, the surveyor had two behavioral descriptions for each client; one from the clinic records outlining his behavior as it was at the time he was seen, and one portraying his behavior as it was at the time of this study, two years later.

Each new description was then transcribed to a form which resembled the original as closely as possible. The variations between the two were often in words of degree. For instance, the word "average" on the original may have changed to "above average" on the second description. "Fair" may have been substituted for "poor,"

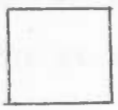
etc. Numerical estimates and the like could also vary. For instance, "1 asthma attack per day" on one form may have become "2 asthma attacks per day" on the other form. At times it was necessary to add a sentence or two for behaviors and symptoms which had appeared during the two years; and sometimes it was necessary to delete descriptions of maladaptive behaviors which had disappeared. In any case, the two descriptions were as physically alike as possible in order that there were no clues as to which one described on going behavior and which one was a description of behavior at the time of the visit. Examples of two such forms are given in Appendix D.

Three judges used these two descriptions to determine the direction and amount of behavioral change for each client. This three-judge panel consisted of clinical psychologists not associated with the Fort Hays Clinic. Each judge had to evaluate each client's progress individually and the surveyor combined the ratings to arrive at one final estimate for each subject. Every judge was asked to determine which description was characteristic of a more maladaptive pattern of behavior, and then to estimate how much difference there was between it and the remaining description.

The instructions that were given to each judge to be followed for each pair of descriptions were as follows:

> Read each of the two descriptions carefully and decide which portrays the more devient (maladaptive) or undesirable pattern of behavior. After this, assume that the one you've chosen is a description of the condition of the client when he was first seen at the Fort Hays State Psychological Service Center approximately two years ago. Then consider the other description as being the behavior the client is now exhibiting. On the continuum supplied with each pair of descriptions rate with a check mark the degree to which the client has improved (amount of improvement the latter description shows over the former). In the box in the right hand corner, give the number (1 or 2) of the description you are rating as showing improvement.

The continuum that was used was five inches long and labeled "Little Improvement" on the left end and "Great Improvement" on the right. The word "moderate" was printed in parenthesis in the center (Figure 1).



Little Improvement (Moderate) Great Improvement

Figure 1. Continuum used by the judges to rate amount of improvement.

A check mark at any point along the continuum gave a judged estimate of the amount of improvement. For instance, a check mark two and one-half ($2\frac{1}{2}$) inches from

the left end was interpreted as moderate improvement or, operationally, two and one-half inches of improvement.

This data from the judges gave the surveyor information concerning the direction of change and an estimate of amount of change. In those cases where the behavioral description chosen as least adaptive was the behavior displayed by the client at the time of the study, this surveyor designated the direction of change as poorer. The judged amount of change in this case was estimated by merely transferring the judgment of improvement to a same-sized scale labeled "Great Deal Worse" on the left to "A Little Worse" on the right. The words "moderately worse" were entered in parenthesis at the center of the continuum (Figure 2). For instance, if a client at the

Great Deal Worse (Moderately Worse) A Little Worse

Figure 2. Continuum used when the client's behavior had become more devient.

time of this study had temper tantrums twice as often as he did two years before, his former behavior pattern would be judged as more adaptive and probably rated as moderately to greatly improved. The client's on going behavior would then be designated as more maladaptive and be rated as moderately to a great deal worse. The total scale, therefore, would appear as in Figure 3. The solid checkmark (√) on the scale represents the rating given by the judges for the behavioral pattern of two years before, and the dotted check mark (√) on the left signifies the rating the later, more devient behavior would receive.

In combining the judges' ratings, the surveyor took into account all three estimates. In deciding the direction of change, the majority opinion (two judges) ruled. In deciding the amount of change, the median estimate in inches from the left of the "improvement" continuum was used. For instance, if one judge placed his check mark four (4) inches from the left end; another three (3) inches; and the third two (2) inches, the median of three (3) inches was used as the point of the combined improvement estimate. In this case the improvement would have been estimated as moderate or, in operational terms, "three inches of improvement." In cases where one of the judges disagreed with the second and third in regard to

Great Deal Worse	(Moderately Worse)	A Little Worse	A Little Improvement	(Moderate)	Great Improvement

Figure 3. Total rating scale.

Note: An area for estimates stating that the descriptions are alike was not included. It was decided that it was unlikely that behavior and amount of deviency would remain the same after two years.

the direction of change, the amount of change was still determined by using the median.

Analysis of Data

After the data had been collected, each subject had (1) a combined judge's rating of "improved" or "worse," (2) a rating of "improved" or "worse" from the parents, and (3) a similar rating from the second party. He also had (4) an estimate in inches as to the amount of improvement or deterioration of his behavior from the judges. There were three (5) estimates of the degree to which the directions that were given in the clinic were followed. One was from the parents, another from the second party, and the combined from which was averaged from the parents and second party's ratings on the second last item on the questionnaire. And, from the last item on the questionnaire each subject received a (6) "yes," "no," or "cannot decide" response from the parents and second party in regard to the "worthwhileness" of the trip to the clinic (See Appendix C).

In an attempt to determine the role played by the clinic in behavioral change, the main statistical computations were the correlation coefficients run between the estimated amount of improvement and the estimated degree to which the advice given in the clinic was followed. Thus a significant positive correlation would indicate

that as the degree to which the clinical recommendations were followed went up, the higher the amount of improvement in the subject. To simplify calculation the operational estimates of improvement were all transferred to positive numbers ranging from 1 to 10. On the complete scale (Figure 3) a minus five inches (-5) became a zero (0) and a plus five inches (+5) became a ten (10). The value each subject received was then the distance in inches from the left end of the continuum to the point of his judged amount of improvement. His value for the degree to which the clinical advice was followed was that reported by his parents, the second party, and also the value made up of the simple mean between the parents' and second party's rating on the eight unit continuum. In cases where only one party of each pair made this estimate (3 cases) the value chosen by the other was used.

Various other computations (usually X^2) were run between several variables and will be described in the next chapter. Often these latter procedures were carried out to answer questions of experimental interest rather than for direct purposes of this survey.

CHAPTER IV

RESULTS

A total of 162 questionnaires, including the second "reminder" letters, were sent. Of these, 79 were returned to the clinic. Five were blank either because the child's parents had moved to an unknown address or the teachers or doctors involved had not had any associations with the client after the clinical visit. Of the 74 remaining, 39 were from parents and 35 were from second parties.

Breaking down the total, 37 of the 39 estimates of the parents stated that the children had improved. One child's parents reported that he had gotten worse although they noted several areas in which he had improved and did not mention any new problems. The parents of the last child stated that they couldn't decide if there had been improvement or not.

Of the 35 questionnaires returned by the second parties, 26 children were reported as having improved, 2 stayed the same, and 3 became worse. On 4 questionnaires no decision was made.

Another observation based on the entire 74 responses is that concerning the worthwhileness of the trip to the clinic. Of the 39 estimates of the parents, 32 agreed it was worthwhile, 5 could not decide and 2 said it was not

worthwhile. For the 35 estimates from the second parties, 30 reported that the trip was worthwhile, 4 could not decide and 1 said it was not worthwhile.

Of the total of 74 returned questionnaires, 56 paired up to supply the required two sources for each subject, thus making the usable N equal to 28. The data for these subjects, including the combined judges' estimates, are listed in Appendix E. Table I is a summary of the ratings of improvement and non-improvement. As can be seen, all of the children were considered improved by the

TABLE I

Summary of the ratings of improvement and non-improvement
(N = 28)

Raters	Improved	Non-Improved (same; worse; cannot decide)	Per cent Rated as Improved
Parents	28	0	100%
Second Parties	23	5	82%
Judges (Combined)	23	5	82%

parents and 23 or 82% were rated as such by both the second parties and the judges (combined judges' estimates). The ratings of improvement and non-improvement were not significantly different between any of the three sources (corrected $X^2 = 3.51$; $P > .06$). As for agreement on individual cases,

the judges in combination and the second parties, of course, disagreed with the parents on five occasions. As for the judges and second parties, although both agreed that there were 82% improved, they did not agree closely as to which cases did not improve (X^2 = .016; P>.80; contingency coefficient = .024).

The agreement between the parents and the second parties regarding the worthwhileness of the trip was quite close. Twenty-three of the parents and 24 of the second parties stated that the trip was worthwhile. Two parents and only one second party reported that the trip was not worthwhile. Three of each could not decide. The agreement between the parents and second parties was quite close. There was only one major disagreement where the parent stated that the trip was not worthwhile with the corresponding party reporting that it was. (See Appendix E.)

In regard to the degree to which the directions given in the clinic were followed, both the parents' and the second parties' estimates ranged from "very little" (2) to "very closely" (7). The resulting combined range was from "a little less than half-way" (4) to "very closely" (7). The mean for the parents was 5.9 with a standard deviation of 1.22. The mean for the second parties was 5.6 with a standard deviation of 1.47. The combined mean was 5.8 with a standard deviation of .95.

The range of the operational amounts of improvement (after they were placed on the ten-unit continuum) was from 4.37 inches to 7.38 inches. The mean was 5.58 inches with a standard deviation of .89. In their raw form (medians) these estimates had a mean of .58 with a standard deviation of .83.

The correlation coefficient between amount of improvement as determined by all the judges and the combined estimates of the degree to which the advice given in the clinic was followed was -.08. Correlation coefficients were also calculated between the judges' combined estimates of amount of improvement and (1) the parents' and (2) the second parties' individual estimates of degree to which the advice was followed. The former correlation equaled .07 and the latter was -.16. None was significant.

Of experimental interest were the statistics dealing with the data from the three judges. These data are included in Table II. Judge No. 1 rated 24 (85%) children as improved, and judges 2 and 3 rated 22 (79%) children as improved. The difference is not significant (corrected $X^2 = .12$; $P > .70$).

The mean amount of improvement according to judge No. 1 was .65 inches with a standard deviation of .76. For the second judge the mean was .69 inches with a standard deviation of .96, and judge 3 had a mean of .85 inches with

a standard deviation of 1.20. The means were not significantly different, including the combined mean.

Of importance was the inter-judge reliability coefficients because of the effect it had on the coefficients between estimated amount of improvement and degree to which the recommendations made in the clinic were followed. The values were r = .34 between Judges 1 and 2, r = .30 between Judges 1 and 3, and r = .58 between Judges 2 and 3. Only the latter coefficient was significant ($P < .01$). It should be noted that agreement about direction of improvement among the judges was quite high. Of the 28 judgments made, all three judges agreed 25 times, while each judge agreed with each other judge 26 times. (See Table II.)

TABLE II

Individual judges' ratings

Subj. No.	JUDGE No. 1		JUDGE No. 2		JUDGE No. 3	
	Improved (I) - Not Improved (NI)	Amount	Improved (I) - Not Improved (NI)	Amount	Improved (I) - Not Improved (NI)	Amount
1	NI	— .06	NI	— .06	NI	— .19
2	I	.19	I	1.13	I	.25
3	I	2.75	I	1.13	I	2.25
4	I	.75	I	2.38	I	2.38
5	I	.56	I	2.31	I	2.38
6	I	1.50	I	.63	I	.31
7	I	.75	I	.06	I	.13

TABLE II
(continued)

8	I		.38	I		1.00	NI	— .13
9	I		.50	I		.19	I	.38
10	I		.75	I		2.00	I	.44
11	I		.75	I		2.31	I	4.75
12	I		.25	I		1.00	I	2.25
13	NI	—	.25	NI	—	.50	NI	— 2.25
14	I		.88	I		1.06	I	.31
15	I		2.19	NI	—	.44	I	.44
16	NI	—	.63	NI	—	.50	NI	— 2.25
17	I		1.75	I		.06	I	.25
18	NI	—	.06	NI	—	1.13	NI	— .38
19	I		.50	I		.50	I	2.31
20	I		.50	I		.06	I	.31
21	I		.50	I		.06	I	.19
22	I		.31	I		.06	I	.25
23	I		.63	I		1.75	I	4.75
24	I		.13	NI	—	.44	NI	— .25
25	I		.50	I		.13	I	2.06
26	I		.06	I		.06	I	.25
27	I		.75	I		1.44	I	2.31
28	I		1.94	I		2.38	I	.38

CHAPTER V

DISCUSSION

The main purpose of this study was to determine the effectiveness of the services rendered by the Fort Hays Clinic. To do this, three steps were outlined and carried out.

The first one was to discover the behavioral changes that had taken place in children who were seen at the clinic two years prior to this study. The 74 returned and completed questionnaires supplied this information. Is it reasonable to assume that this sample is representative? It definitely is not and was not planned to be a sample of the entire clinic's client population. It deals only with those children who met the requirements outlined in Chapter III, the total of which is approximately one-third of the client population. The assumption that the Ss of this project made up a representative sample of this one-third is difficult to make. An obvious variable, the effects of which are not known, is not accounted for in the sample. It is that factor that makes some people respond to correspondence and others not. Perhaps the people who do reply are more conscientious in general and this could be a factor in bringing about behavioral improvement in children.

It is generally agreed that response to inquiries made through the mails will be low. It is felt that the response to the requests made in this survey (about 50 per cent) is typical and thus the sample is representative in this respect. Also, since most schools were closed for the summer at the time of the survey, it is likely that many questionnaires were not received due to vacationing teachers, parents, etc. No response from these people can not simply be interpreted as a lack of interest or hostility toward the clinic.

As far as actual behaviors were concerned, the questionnaires were usually filled out completely, thus giving the surveyor information about the current status of past devient behaviors. Very seldom were new or recently appearing devient behaviors reported. This was reassuring because it was generally consistant with the ratings which concluded that most of the children had improved.

One of the most difficult tasks concerning behavioral changes was to discover and then put down on paper those changes which were small and which referred to data that were almost unquantifiable. Whenever the changes were in such areas as grades in school, this task was fairly simple. But in cases such as stuttering, where the reply might be, "Yes, he stutters, but not quite as badly as he used to," the task of transferring the notion of a bit of improvement

without giving away time sequences was difficult and was usually not attempted. Both the "before" and "after" descriptions carried the single word, stutters. This factor could, of course, partially account for the higher number of improved ratings by the parents since they were aware of these small improvements.

On the whole, the lack of sensitivity of the questionnaire method limits the exactness of the behavioral descriptions. However, it seems to be accurate for gross or outstanding behaviors which are naturally the target and concern of any kind of therapy. It is improvement on these behaviors that one is usually most concerned about.

Another matter of concern was the possibility of surveyor bias in converting and transcribing the questionnaire information. As was mentioned in Chapter III, some a priori rules were followed. These served as one check which, it is hoped, kept bias down.

A second purpose of this study was to determine if the behavioral changes were more or less adaptive than those displayed previously. There was general agreement between the parents, second parties, and judges that these behaviors had become more adaptive. The parents all agreed that improvement had taken place. Many reasons, such as close emotional ties, strong desires to see improvement, tendencies

to magnify small gains and disregard setbacks, etc. all can be offered to attempt to explain this high percentage of improvement responses for the parents. However, the teachers, principals, doctors, etc., a more objective group of raters one would think, also showed general agreement with the parents that there had been a large number of improvements. Although it can be seen that they too could possibly be involved much like the parents, and perhaps even more so because of professional pride, it would seem that their estimates give more authority to and help confirm the ratings of the parents. The judges, too, although they had to base their judgments on descriptions given by people who saw the subjects as improved, arrived at the same conclusions as far as the number of improved children is concerned.

There are, of course, other factors to consider which may have biased the overall estimates. One of these factors is the absence of information about 23 of the original possible 69. That the survey N (28) approximates the actual total of improved children is a possibility. However, this chance would seem slight when one considers that the trend is the same in the returned questionnaires that did not pair up (67%). Another factor to consider in regard to the large amount of improvement estimates is that there was undoubtedly some hesitancy to answer, "No,

you didn't help us," to an agency that gave them professional services free, and which was evidently desirous of receiving affirmative replies.

The only estimate as to amount of improvement is from the judges. The mean of .58 inches for the judges' combined estimate is on the "very little improvement" end of the continuum. However, the range is from -.63 ("a little worse") to 2.38 ("moderate improvement"). The range, taking into account all of the judges' individual scores, is from -2.25 ("moderately worse") to 4.75 ("great deal of improvement"). Based upon these figures, it would appear that the bulk of the improvement has been little to moderate. These labels themselves have no objective meaning but are generally used in rating amount of improvement (Eysenck, 1952; 1961; Levitt, 1957). Also, the agreement between the judges in regard to amount of improvement for each case (inter-judge reliability) is generally poor which suggests that they disagreed on what was great improvement and what was little improvement, although they were in high agreement as to which individuals improved and which got worse.

A third purpose of this research was to draw some conclusions about the nature of these behavioral changes, and to discover the part the clinic played in bringing them about.

The largest single category of problems centered around difficulties in school. The changes described by

the parents and teachers were usually for the better. The most frequent school problems dealt with grade average and reading ability. Of the children with grade problems twelve improved, two became worse, and about six stayed the same. Poor reading ability usually did not improve a great deal. Most of the remaining behavioral changes were usually reductions in degree of severity of the problems reported two years earlier. These included the whole range of problems which occur in the child who is emotionally disturbed.

The attempt to correlate the estimated degree to which directions given in the clinic were followed with the estimated amount of improvement was unsuccessful. The reasons for this were (1) poor inter-judge reliability and (2) the short range (4.5 - 7 for combined, and 2 - 7 for the parents and second parties uncombined) with only six possible values was too crude a measure to actually differentiate the respondents on the degree-to-which-directions-were-followed continuum. Although the coefficients were computed and found to be insignificant (Chapter IV), they would seem to be quite meaningless.

Just what effect the experience at the clinic had on the child and the parent is difficult to say. Nearly all the respondents reported that they followed the recommendations or advice given in the clinic to some degree (usually

half-way or more). If this was the case, then the experience did have some kind of effect. And since most of the children apparently improved, it is possible that it facilitated behavioral change for the better. The parents and second parties agreed that the trip was worthwhile, thereby giving some credit to the clinic.

The results of this study would generally seem to indicate that the disturbed children seen at the Fort Hays Clinic tend to improve. This large percentage (82%) of improved children might even please the tax-paying layman. One might conclude, "Here is a state-owned establishment whose physical facilities consist of a half-dozen small rooms; whose staff is small and works only half-time; that processes approximately 200 'neurotic' children each year; that achieves positive results in 164 of these cases; and that accomplishes all this in about three hours' time." Although somewhat facetious, such a cursory glance at the data would lead to this conclusion.

The big question here is: Just what part does the clinic play in these changes, or, in other words, is it effective? To be considered effective its methods would have to be able to result in improvement in more cases, or improvement in a shorter length of time, than would occur if these same or similar cases do not receive this treatment.

The difficulty arises when we attempt to find out how many would improve without any treatment. If we can assume 50% improvement without treatment our results (82% improved) would be significantly greater (corrected X^2 = 10.32; $P < .01$).

However, how much improvement can we really expect without any treatment? Eysenck (1925) presents data dealing with adults from various sources and concludes that . . . "roughly two-thirds of a group of neurotic patients will recover or improve to a marked extent within about two years of the onset of their illness, whether they are treated by means of psychotherapy or not" (p. 222). Eysenck, (1961) also reviews many studies concerning both children and adults and arrives at the general conclusion that they ". . . suggest that the therapeutic effects of psychotherapy are small or non-existent, and do not in any demonstrable way add to the non-specific effects of routine medical treatment, or to such events as occur in the patient's everyday experience" (p. 720). Levitt (1957) also reviews many studies concerning the effects of psychotherapy or psychological treatment. He derived from a review of studies that 72.5% of children who have problems serious enough to warrant therapeutic help (not including delinquents, mental defectives, and psychotics) improve without having psychological treatment. The percentage of improved

children in an N of 7,987 who were treated was 73.27%, practically the same as the controls' improvement percentage.

The percentage of improved children in this study (82%) does not differ by a statistically significant degree from the 72.5% that, according to Levitt, would have improved without having received any help (corrected $X^2 = 1.56$; $P > .20$). Also the groups that Levitt studied were in many ways very similar to the groups seen at the Fort Hays Clinic. The time it took for improvement in the controls was also consistant with the time needed for improvement to appear in the children who were treated.

Eysenck's and Levitt's reviews seem to have a strong case for the therapeutic effect of no therapy. However, the children who made up their control groups were at least brought to a clinic for evaluation, thus showing concern in the persons who referred them. This makes them quite different from children who were never referred. Also, this situation is much like the Fort Hays Clinic's procedure, except, supposedly, for the dispensing of advice. A control group made up of children with equal problems without any clinical experience is needed.

More research is needed to obtain a more complete picture of the clinic's achievement. The children who were seen at the clinic but not included in this survey should be

studied to determine the success of the clinic in the areas of the mentally deficient and mentally retarded.

Another factor that should be added is a control group to determine if improvement also takes place without the clinical experience. One way in which this could be done is by asking for teachers' cooperation in pointing out "problem" children, diagnosing them in some discrete manner (group I.Q., projective and personality tests in the classroom) and re-evaluating and comparing them later with a similar group of children that did have the clinical experience.

It is felt that the time used in preparing and sending questionnaires could actually be used more advantageously by personally rediagnosing the subjects. Despite the large number of people contacted by this surveyor, the usable N was only 28. This surveyor feels that his time might have been better spent by personally rediagnosing the subjects which would also have resulted in more accurate behavioral estimates.

CHAPTER VI

SUMMARY AND CONCLUSIONS

This study attempted to determine the effectiveness of the Fort Hays Kansas State College Psychological Service Center. To do this it proposed (1) to discover the behavioral changes that had taken place in children who were seen at the clinic during the fiscal year, 1961-62, two years prior to this study, (2) to determine if these behavioral changes were more or less adaptive than those displayed two years earlier, and (3) to draw some general conclusions about the nature of these changes and the part the Fort Hays Clinic played in bringing them about.

Information about each child's condition at the time of the study was sought by means of questionnaires sent to parents and other parties. Twenty-eight (28) children met the survey method's requirements and became the N. The parents and the various second parties were asked to decide if the children had improved or become worse; to report how closely they had followed the recommendations given to them during the visit to the clinic; and to rate the trip to the clinic as worthwhile or not worthwhile.

Two behavioral descriptions, a "before" and an "after", were drawn up for each child. Three judges, clinical psychologists, were asked to decide if one of the pair showed

improvement over the other, and to estimate how much improvement there was (little to a great deal). Besides finding percentages and making other comparisons, correlation coefficients were determined between degree to which the directions given in the clinic were followed and the judged amount of improvement. Significant positive correlations would then (hopefully) indicate that the clinic was involved in the improvement of the children and thus be considered effective.

The conclusions drawn by the study were that a large percentage (82%) of the children were improved, that the clinic's role in the changes was probably a factor in the improvement, and that the services rendered by the clinic were considered worthwhile by the parents and other parties. It could not be decided if the number of improved was actually greater than could be expected if the children had not had the clinical experience. It was also concluded that further research, a longitudinal study with a control group, would be necessary before more definite answers about the effectiveness of the Fort Hays Clinic could be given.

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APPENDIXES

APPENDIX A

FORM LETTERS INCLUDED IN EACH REQUEST FOR BEHAVIORAL INFORMATION

Mr. and Mrs. John Doe

(Address)

Dear Mr. and Mrs. Doe,

In order to continue bringing good service to the people of Central and Western Kansas, the staff of the Fort Hays Kansas State College Psychological Service Center asks for your cooperation in evaluating its present clinical program. With information supplied by you and others we will better be able to judge how effective our present procedures are and what changes are necessary.

We have asked you to help with this project because our records show that you have been personally involved with the clinic and with a child that was seen here. This past association will make your information very valuable to us.

Enclosed you will find a questionnaire and a self-addressed, stamped envelope. The questionnaire is so designed as to make it quick and easy to fill out. Please attempt to answer all of the questions as accurately and as truthfully as possible. If something is not clear, mention it and explain in your own words. Once the questionnaire is filled out, simply use the self-addressed envelope and mail it.

You may seek the aid of any person who you believe can help you in providing the correct information. If sufficient space is not provided you may add extra sheets of paper.

We wish to inform you that all the information you disclose will be kept completely confidential. Please reply as soon as possible.

Thank you for your cooperation.

Sincerely yours,

William F. Gwynn, Ph.D.
Director

Mr. and Mrs. John Doe

(Address)

Dear Mr. and Mrs. Doe,

A short time ago you received a request asking for your cooperation in evaluating the existing program of the Fort Hays Kansas State College Psychological Service Center. You were asked to fill out a questionnaire concerning a child that was seen here approximately two years ago. We have not heard from you. We realize that it has been only a short time but we are attempting to complete this study within one more month. This means we will need your information within one week. If you can possibly find time, please fill out the questionnaire and mail it as soon as possible.

Enclosed you will find another copy of the questionnaire (in case you have mislaid yours) and a business reply envelope which is self-addressed and requires no postage.

You may seek the aid of any person who you believe can help you in providing the correct information. If sufficient space is not provided you may add extra sheets of paper.

We wish to remind you that the information that you disclose will be kept confidential. Please reply as soon as possible.

Thank you for your cooperation.

Sincerely yours,

William F. Gwynn, Ph.D.
Director

P. S. If your information is on the way to us, please disregard this request. Thank you.

APPENDIX B

A SAMPLE LIST OF SYMPTOMS AND BEHAVIORS OBTAINED FROM A HYPOTHETICAL CLINICAL REPORT

Name: John Doe Jr. Age: 11 Sex: Male
I.Q.: 96
Sept. 10, 1960

Asthma	------	3 attacks per day Takes shots
Nervousness	------	In school; during meals at home
Attitude toward school	------	"Do not see any value in it."
Study habits	------	Poor
Grades in school	------	Less than average; very poor reader
Other	------	Bites fingernails Slight speech impediment

APPENDIX C

A SAMPLE QUESTIONNAIRE DERIVED FROM THE INFORMATION GIVEN IN APPENDIX B

Name of child: John Doe Jr.
Seen at the clinic on September 10, 1960

Please answer the following questions about John as accurately as possible:

How many attacks of asthma does John now have on the average each day? _____

How often does he receive shots for his asthma (if he still has asthma)? _____

If John shows unusual nervousness, list when and where and in what situations he is especially nervous:

_____

_____

_____

_____

If he is seldom nervous, check here:

How are John's study habits? (Check one)

☐ poor ☐ fair ☐ good

Taken as a whole, how are John's grades in school? (Check one)

☐ below average ☐ average ☐ above average

List those subjects or skills at which John is especially good at or especially poor at.

especially good at	especially poor at
_____	_____
_____	_____
_____	_____

Does John bite his fingernails? (Check one) ☐ yes ☐ no

Below please write a short note and describe any problems or symptoms that John has now that he did not seem to have two years ago.

Since John was seen at the clinic he has _____ (Check one)
☐ improved ☐ gotten worse

(Here we want your opinion)

Please indicate below with a check mark how closely you believe the advice given to you by the Fort Hays Clinic was followed.

8 ☐ Exactly

7 ☐ Very Closely

6 ☐ Fairly Closely

5 ☐ A Little More Than Half-way

4 ☐ A Little Less Than Half-way

3 ☐ Fairly Little

2 ☐ Very Little

1 ☐ Not at All

Do you feel the trip you made to the Psychological Service Center at Hays was worthwhile? (Check one)

☐ Yes, was worthwhile ☐ No, was not worthwhile

☐ Cannot decide

Signature_____

Note: The last 3 items were included in every questionnaire.

APPENDIX D

TWO BEHAVIORAL DESCRIPTIONS TAKEN FROM THE HYPOTHETICAL CASE OF APPENDIX B. THE FIRST IS A DESCRIPTION OF THE CLIENT'S BEHAVIOR AND SYMPTOMS WHEN HE WAS SEEN AT THE CLINIC, AND THE OTHER A DESCRIPTION OF HIS CONDITION NOW (HYPOTHETICALLY).

No. 1*

Name: John Doe Jr. Age: 11-13 Sex: Male I.Q.: 96

Asthma	------	3 attacks per day Takes shots
Nervousness	------	In school; during meals at home
Attitude toward school	------	"Do not see any value in it."
Study habits	------	poor
Grades in school	------	Less than average
Others	------	Very poor reader Bites fingernails Slight speech impediment

---

No. 2*

Name: John Doe Jr. Age: 11-13 Sex: Male I.Q.: 96

Asthma	------	3 attacks per day takes shots
Nervousness	------	During tests in school
Attitude toward school	------	"OK except for reading"
Study habits	------	good
Grades in school	------	average
Others	------	very poor reader Bites fingernails Slight speech impediment Cries easily

* One of the lists in each pair was labeled, "No. 1" and the other, "No. 2." A flip of the coin for each pair decided which list received each number.

APPENDIX E

RAW DATA
(N=28)

Subj. No.	Judges' Estimates: Improved (I) - Not Improved (NI)	Judges' Estimates: Operational Amount of Improvement		Parents' and Second Parties' Estimates: Improved (I) - Not Improved (NI)		Parents' and Second Parties' Estimates: Degree to which directions were followed			Parents' and Second Parties' Estimates: "Was the trip worthwhile?"	
		Original Median*	Converted	Parents	2nd Party	Parents	2nd	Combined	Parents	2nd
1	NI	— .06	4.94	I	I	7	6	6.5	Yes	Yes
2	I	.25	5.25	I	I	6	3	4.5	Yes	Yes
3	I	2.25	7.25	I	I	7	7	7.0	Yes	Yes
4	I	2.38	7.38	I	I	6	6	6.0	Yes	Yes
5	I	2.31	7.31	I	I	-	5	5.0	No	No
6	I	.63	5.63	I	I	5	6	5.5	Yes	Yes
7	I	.13	5.13	I	I	7	4	5.5	Yes	Yes
8	I	.38	5.38	I	c.d.**	7	7	7.0	Yes	Yes
9	I	.38	5.38	I	I	5	5	5.0	Yes	Yes
10	I	.75	5.75	I	same	6	6	6.0	c.d.	c.d.
11	I	2.31	7.31	I	I	7	4	5.5	No	Yes
12	I	1.00	6.00	I	I	6	2	4.0	Yes	Yes
13	NI	— .50	4.50	I	I	4	7	5.5	Yes	Yes
14	I	.88	5.88	I	I	6	6	6.0	Yes	Yes
15	I	.44	5.44	I	I	6	6	6.0	Yes	Yes
16	NI	— .63	4.37	I	I	-	7	7.0	c.d.	Yes
17	I	.25	5.25	I	I	7	5	6.0	Yes	Yes
18	NI	— .38	4.62	I	same	-	7	7.0	Yes	Yes

(APPENDIX E, con't)

19	I		.50	5.50	I	I	2	6	4.0	Yes	Yes
20	I		.06	5.06	I	I	3	6	4.5	Yes	Yes
21	I		.19	5.19	I	I	6	6	6.0	Yes	Yes
22	I		.25	5.25	I	I	6	6	6.0	Yes	Yes
23	I		1.75	6.75	I	NI	6	3	4.5	Yes	c.d.
24	NI	—	.25	4.75	I	I	6	3	4.5	c.d.	Yes
25	I		.50	5.50	I	c.d.	7	7	7.0	Yes	Yes
26	I		.06	5.06	I	I	6	7	6.5	Yes	Yes
27	I		.44	5.44	I	I	6	7	6.5	Yes	Yes
28	I		1.94	6.94	I	I	6	7	6.5	Yes	Yes

* Minus (—) indicates that the description chosen as showing improvement was the description of the subject 2 years prior to this study.

** cannot decide